

ABSTRACT

An optical disk device has an aperture of an objective lens in an incoming path of a beam from a semiconductor laser to an optical disk
5 formed larger than an aperture in a return path from the optical disk or an aperture is varied in recording and in reproduction. This configuration improves recording/reproducing ability since light is focused on an optical disk with high numerical aperture. In addition, since reflected light from the optical disk is detected with low numerical aperture, margins for tilt and
10 defocus are not reduced. Furthermore, since unnecessary signal components contained in the reflected light can be eliminated, a S/N (signal-to-noise ratio) of an information signal also increases. Thus, a high-performance optical disk device can be obtained. Alternatively, by varying the aperture of an objective lens in recording and in reproduction, an optical
15 disk device in which recording density and recording quality are increased without deteriorating reproduction quality can be obtained.